<!--StartFragment-->GenCore version 6.2.1 Copyright (c) 1993 - 2008 Biocceleration Ltd.

OM nucleic - nucleic search, using sw model

Run on: April 29, 2008, 13:52:39; Search time 11061 Seconds

(without alignments)

17362.216 Million cell updates/sec

US-10-532-944-7 Title:

Perfect score: 2346

1 gtgggcatgattcacgagca.....cgttttccatccatgtgtga 2346 Sequence:

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

9588671 segs, 40929980300 residues Searched:

Total number of hits satisfying chosen parameters: 19177342

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

GenEmbl:* Database :

1: qb_env:*

2: gb_pat:*

3: qb_ph:*

4: qb_pl:*

5: qb pr:* 6: qb_ro:*

7: qb_sts:*

8: gb_sy:*
9: gb_un:*

10: qb_vi:*

11: gb_ov:*

12: gb_in:*

13: qb_om:*

14: gb_ba:*

15: qb_htq1:*

16: qb_htq2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	SOTTEMETED						
Re	esult No.	Score	% Query Match	Length	DB	ID	Description
	1	2346	100.0	8690	14	AJ252161	AJ252161 Alicyclob
	2	2187	93.2	2187	2	DD448952	DD448952 GLUCOSIDA
	3	1002	42.7	3097	14	AJ133789	AJ133789 Alicyclob
	4	597.2	25.5	3854	14	AB012238	AB012238 Bacillus
	5	427.4	18.2	110000	14	CP000386_21	Continuation (22 o
	6	423.2	18.0	110000	14	AE017262_01	Continuation (2 of

	7	423	18.0 110000	14		Continuation (23 o
	8	423	18.0 110000	14		Continuation (24 o
	9	416.8	17.8 110000	2	BD455614_01	Continuation (2 of
	10	416.8	17.8 200050	14		AL591973 Listeria
	11	416.8	17.8 349980	2	AX638811	AX638811 Sequence
	12	412	17.6 7787	2	AX416892	AX416892 Sequence
	13	409	17.4 231450	14		AL596163 Listeria
	14	409	17.4 349980	2	AX415067	AX415067 Sequence
	15	409	17.4 349980	2	AX453571	AX453571 Sequence
	16	384.6	16.4 110000	14		Continuation (15 o
С	17	379.4	16.2 110000	14	BA000045_01	Continuation (2 of
С	18	360.4	15.4 110000	14	CP000360_07	Continuation (8 of
С	19	360.4	15.4 110000	14	CP000360_08	Continuation (9 of
	20	344	14.7 110000	14	CP000411_07	Continuation (8 of
	21	337.2	14.4 2259	14	EF635970	EF635970 Thermoana
	22	332.6	14.2 304274	14	AL935262	AL935262 Lactobaci
	23	319.8	13.6 2301	2	DD459592	DD459592 Lactobaci
С	24	319.8	13.6 110000	14	CP000033_18	Continuation (19 o
С	25	319.8	13.6 110000	14	CP000413_17	Continuation (18 o
	26	319.6	13.6 9699	14	AE012974	AE012974 Thermoana
	27	312.4	13.3 110000	14	BA000019_56	Continuation (57 o
	28	299.8	12.8 110000	14	BA000045_16	Continuation (17 o
	29	299.8	12.8 110000	14	CP000721_16	Continuation (17 o
	30	290.8	12.4 110000	14	CP000383_08	Continuation (9 of
	31	290.8	12.4 110000	14	CP000383_09	Continuation (10 o
	32	284.4	12.1 232605	14	AE017222	AE017222 Thermus t
С	33	282.4	12.0 110000	14	BA000030_83	Continuation (84 o
	34	281.2	12.0 2328	2	BD179690	BD179690 Highly th
	35	281.2	12.0 256992	14	AP008227	AP008227 Thermus t
С	36	280.6	12.0 110000	14	AE017198_18	Continuation (19 o
	37	280.6	12.0 349980	2	AX926712	AX926712 Sequence
	38	280.6	12.0 349980	2	AX926713	AX926713 Sequence
	39	278	11.8 2703	2	DD355846	DD355846 Dextrinde
	40	276.2	11.8 2307	14	DQ857783	DQ857783 Lactobaci
	41	268	11.4 110000	14		Continuation (33 o
	42	263.8	11.2 2926	6	BC117889	BC117889 Mus muscu
	43	263.8	11.2 3484	4	AK243062	AK243062 Oryza sat
	44	262.2	11.2 2923	6	BC117888	BC117888 Mus muscu
	45	262.2	11.2 2998	6	BC128069	BC128069 Mus muscu

ALIGNMENTS

```
RESULT 1
AJ252161
                                   8690 bp
LOCUS
          AJ252161
                                              DNA
                                                      linear
                                                               BCT 15-APR-2005
DEFINITION Alicyclobacillus acidocaldarius maltose/maltodextrine transport
           gene region (malEFGR genes, cdaA gene and glcA gene).
ACCESSION AJ252161
VERSION
          AJ252161.1 GI:6686561
KEYWORDS
           alpha-glucosidase; cdaA gene; cyclomaltodextrinase; glcA gene; malE
           gene; malF gene; malG gene; MALR gene; maltose binding protein;
           maltose transport membrane protein; repressor of maltose transport
           genes.
SOURCE
           Alicyclobacillus acidocaldarius
  ORGANISM Alicyclobacillus acidocaldarius
           Bacteria; Firmicutes; Bacillales; Alicyclobacillaceae;
           Alicyclobacillus.
REFERENCE
 AUTHORS
           Hulsmann, A., Lurz, R., Scheffel, F. and Schneider, E.
```

```
TITLE
            Maltose and maltodextrin transport in the thermoacidophilic
            gram-positive bacterium Alicyclobacillus acidocaldarius is mediated
            by a high-affinity transport system that includes a maltose binding
            protein tolerant to low pH
            J. Bacteriol. 182 (22), 6292-6301 (2000)
  JOURNAL
   PUBMED
            11053372
REFERENCE
            2 (bases 1 to 8690)
  AUTHORS
            Huelsmann, A.
  TITLE
            Direct Submission
            Submitted (06-JAN-2000) Huelsmann A., Bakterienphysiologie,
  JOURNAL
            Humboldt Universitaet zu Berlin, Chausseestr. 117, 10115 Berlin,
            GERMANY
FEATURES
                     Location/Qualifiers
     source
                     1. .8690
                     /organism="Alicyclobacillus acidocaldarius"
                     /mol_type="genomic DNA"
                     /strain="ATCC 27009"
                     /db_xref="taxon:405212"
                     133. .1416
     gene
                     /gene="malE"
     CDS
                     133. .1416
                     /gene="malE"
                     /function="maltose tranport"
                     /codon_start=1
                     /transl_table=11
                     /product="maltose binding protein"
                     /protein_id="CAB65651.1"
                     /db_xref="GI:6686562"
                     /db_xref="GOA:Q9RHZ6"
                     /db_xref="InterPro:IPR006059"
                     /db_xref="InterPro:IPR006060"
                     /db_xref="PDB:1URD"
                     /db_xref="PDB:1URG"
                     /db_xref="PDB:1URS"
                     /db_xref="UniProtKB/TrEMBL:Q9RHZ6"
                     /translation="MSVRRWGIVSTGVAALVLAGGAIAGCGTSNGGQNTSPSTSSSSA
                     KGEASALPKGQTITVWSWQTGPELQDVKQIAAQWAKAHGDKVIVVDQSSNPKGFQFYA
                     TAARTGKGPDVVFGMPHDNNGVFAEEGLMAPVPSGVLNTGLYAPNTIDAIKVNGTMYS
                     VPVSVQVAAIYYNKKLVPQPPQTWAEFVKDANAHGFMYDQANLYFDYAIIGGYGGYVF
                     \verb|KDNNGTLDPNNIGLDTPGAVQAYTLMRDMVSKYHWMTPSTNGSIAKAEFLAGKIGMYV|\\
                     SGPWDTADIEKAKIDFGVTPWPTLPNGKHATPFLGVITAFVNKESKTQAADWSLVQAL
                     TSAQAQQMYFRDSQQIPALLSVQRSSAVQSSPTFKAFVEQLRYAVPMPNIPQMQAVWQ
                     AMSILQNIIAGKVSPEQGAKDFVQNIQKGIMAQGS"
     sig_peptide
                     133. .210
                     /gene="malE"
                     211. .1413
     mat_peptide
                     /gene="malE"
                     /product="MalE"
     gene
                     1483. .2448
                     /gene="malf"
     CDS
                     1483. .2448
                     /gene="malF"
                     /citation=[1]
                     /codon_start=1
                     /transl_table=11
                     /product="putative maltose transport membrane protein"
                     /protein_id="CAB65652.1"
                     /db_xref="GI:6686563"
                     /db_xref="GOA:Q9RHZ5"
                     /db_xref="InterPro:IPR000515"
                     /db_xref="UniProtKB/TrEMBL:Q9RHZ5"
```

```
/translation="MATVMEMRRSHGRERAKRRVDWVAYGYLSPALVTICVLSILPIF
                YTIYISFTNFNOMHFLSYOFVGLKNYEELLNPHDPLSNLFLPTFIWTLVYALCTTALA
                YLVGLFLAVLLNNKHMRERTLYRTLLIVPWAVPNLISMLAWQGLLNDQYGQINALLHG
                VFGLPRIPWLTSALWARIAVIMVNVWAGFPYMMTVCLGALQSIPTDQYEAAEIDGANW
                WQVFRYVTMPSVWRISLPLLIPSFSYNFNNFNASYLLTGGGPPNSNNPFLGQTDILAT
                AAYKMTLTFNRYDLGATISVLLFILVALISWVQMRYTGAFKEVDA"
                2448. .3353
gene
                /gene="malG"
CDS
                2448. .3353
                /gene="malG"
                /citation=[1]
                /codon_start=1
                /transl_table=11
                /product="putative maltose transport membrane protein"
                /protein_id="CAB65653.1"
                /db_xref="GI:6686564"
                /db_xref="GOA:Q9RHZ4"
                /db_xref="InterPro:IPR000515"
                /db_xref="UniProtKB/TrEMBL:Q9RHZ4"
                /translation="MAMSSQSFSAMKSQRPIAARTRRRRSMQPGEQVALWVSRIVIWC
                VIVMVLLPMWFVVIASFNPSNSYISFSLFPSNASLANYKALFQGGQFWTWVRNSLVVG
                VVVAMAQSFITAMSAFAFSKLRFYGRKYGLMTLLLLQMFPNILAIAAFYTALAKLNMI
                DMLGSYILVMLGTSAFNIWLLKGYMDSVPKELDEAAVIDGATTWQRFIHVTLPLSTPM
                MVVIFFLTLVGIFSEYMFAGTILQSPWNYTLGVGMYNLISGQFAKNWGEFAAAALLSA
                VPLAIVFAVAQRYLTKGLVAGSVKG"
                3379. .4407
gene
                /gene="malR"
CDS
                3379. .4407
                /gene="malR"
                /citation=[1]
                /codon_start=1
                /transl_table=11
                /product="putative repressor of maltose transport genes"
                /protein_id="CAB65654.1"
                /db_xref="GI:6686565"
                /db_xref="GOA:Q9RHZ3"
                /db_xref="HSSP:P03023"
                /db_xref="InterPro:IPR000843"
                /db_xref="InterPro:IPR001761"
                /db_xref="InterPro:IPR010982"
                /db_xref="UniProtKB/TrEMBL:Q9RHZ3"
                translation="MATIKDVARLANVSPSTVSRVLANSPRISEETKRRVRAALEQLN/
                YHPNAFARGLVTNSTGAIGILIPPSAQEFFVNPFFAEWMAGVAEVARQRGVDTVLSTS
                ARGE IETLDHMIRGRRVDGVLLIGARQGDPVLQEVAKLRCPAVLLGRPADPAPISWVN
                NDNQRAAYDATVHLLNLGHRRIGFLGGASDLVVTMDRVAGYRQALVDHGVEPDSRLEV
                SSFFLEQGGYLGMMRLLAIPDRPTAVLCADDVLAFGGMRAAHELGFEVPGDLAIVGFN
                \verb|DIRLAELAHPALTSVRVHMHELGVRSAELLLEEIDQGKPLQRHVIVKHELVIRYSCGA|
                KPIGTLTT"
gene
                4434. .6170
                /gene="cdaA"
CDS
                4434. .6170
                /gene="cdaA"
                /function="linearises cyclomaltodextrines"
                /citation=[1]
                /codon_start=1
                /transl_table=11
                /product="cyclomaltodextrinase"
                /protein_id="CAB65655.1"
                /db_xref="GI:6686566"
                /db_xref="GOA:Q9WX32"
                /db_xref="HSSP:P38940"
```

```
/db_xref="InterPro:IPR004185"
                   /db xref="InterPro:IPR006047"
                   /db_xref="InterPro:IPR006589"
                   /db_xref="UniProtKB/TrEMBL:Q9WX32"
                   /translation="MELVWQHRWAADAYPLDLSTMVLVLRVARCTPAQRVRVHFGDRY
                   EPDFQNSSEARRYGSDGTFDWFTCRVAAPTRRLKYAFEVLSSTGRAVYLGEGGLADTL
                   DAVQPFQYPYIHPSRVLAVPDWVGHAVAYQIFPDRFAVGEQQLVRPTDPWDARPTPDS
                   VFGGNLRGIVDKLPYLSDLGVNLMYLTPIFQAPSNHKYDTQDYFAVDPAFGTLGDLQL
                   LVREAHRLGIRVVLDAVFNHSGFQFAPFQDVIARGTASPYWSWFFVQGDRVDVESVNY
                   ETFATRLRHMPKLNLAEPAAEEYFLQVAKHYVLECDIDGWRFDVANEIDPHFWSRLRS
                   ELRALKPDILLIGEIWHDSLPWLMGDAFDGVMNYPLRELVMRYAMDESIDEPAFAEAW
                   VRLYLQYPRPAWRAMWNLLGSHDTERALTRARGHVPSVVLAFAMLFTLPGIPMVYYGD
                   EIGMEGGTDPDCRRGMIWDANLWQLDLREAVRQLAWLKRTHPALAGDTMEIRDANSGV
                   LHYVRLNGTGPHLHIAVCKRRDFGAEVDSPLFAWDVPSRTSGEERKILIWECDSTEGC
                   GHDSRADGFHNO"
                   6289. .8475
    gene
                   /gene="glcA"
                   6289. .8475
    CDS
                   /gene="glcA"
                   /citation=[1]
                   /codon_start=1
                   /transl_table=11
                   /product="putative alpha-glucosidase"
                   /protein_id="CAB65656.1"
                   /db_xref="GI:6686567"
                   /db_xref="GOA:Q9RHZ2"
                   /db_xref="HSSP:059645"
                   /db_xref="InterPro:IPR000322"
                   /db_xref="UniProtKB/TrEMBL:Q9RHZ2"
                    translation="MVGVAALDDTVLRVAYCRSPGEWPTSTPAIVEQMSQRHSWRLVQ/
                   EERRVQLECVAGWQIQINRDDGTWSIRHLGFGTAVEAITWYKRKKGGALTFASLDNAR
                   FYGLGEKPGPLDKRHEAYTMWNSDVYAPHVPEMEALYLSIPFFLRLQDQTAVGIFVDN
                   PGRSRFDFRSRYPDVEISTERGGLDVYFIFGASLKDVIRRYTKLTGRMPMPPKWALGY
                   HQSRYSYETQSEVLSVAQTFVERDIPVDALYLDIHYMDGYRVFTFDERRFPDPARMCD
                   ELRKLGVRVVPIVDPGVKQDPEYPVYMDGLAHNHFCQTAEGQVYLGEVWPGLSAFPDF
                   ASEEVRAWWGKWHRVYTQMGIEGIWNDMNEPAVFNETKTMDVNVVHRGDGRLYTHGEV
                   HNLYGFWMAEATYRGLKAQLAGKRPFVLTRAGYSGIQRYAAVWTGDNRSFWEHMAMAI
                   PMVLNMGMSGIPLGGPDVGGFAHHASGELLARWTQMGAFFPFFRNHSAMGTHRQEPWA
                   FGPTFEAVIRRAIRLRYRFLPYLYTLAREAHETGLPMMRPLVLEYPDDPNTHHVDDQF
                   LVGSDLLVAPILKPGMAHRMVYLPDGEWIDYETRERYQGRQYILTYAPLDRIPLYVRA
                   GSAIPVNLLERSGETQLGWEIFVDANGRASGRCYEDDGETFSYEDGAYCDRVLQALAT
                   SEGTLIECHLVQGSGDGGSLESVVRVFTPDDVREARAQGISFSIHV"
ORIGIN
 Query Match
                        100.0%; Score 2346; DB 14; Length 8690;
 Best Local Similarity
                        100.0%; Pred. No. 0;
 Matches 2346; Conservative
                              0; Mismatches
                                                0; Indels
                                                             0; Gaps
                                                                        0;
           1 GTGGGCATGATTCACGAGCAGACGGATTTCACAACCAGTGAGGCGATCCGCCCGGATACG 60
             6130 GTGGGCATGATTCACGAGCAGACGGATTTCACAACCAGTGAGGCGATCCGCCCGGATACG 6189
          61 CTGATCTCGCCGCCAGATGACTGGGCTTTTCTCGGGCCGACCCAGCCGGTTTGATGTGGAT 120
             6190 CTGATCTCGCCGCCAGATGACTGGGCTTTTCTCGGGCGACCCAGCCGGTTTGATGTGGAT 6249
         121 CACGATGGCTGGGCGACGGTTCAGTATGACGCTGGAGTCATGGTCGGTGTCGCCGCACTC 180
             6250 CACGATGGCTGGGCGACGGTTCAGTATGACGCTGGAGTCATGGTCGGTGTCGCCGCACTC 6309
         181 GACGACACCGTGCTACGCGTAGCCTACTGCAGGTCCCCTGGGGAGTGGCCGACGAGCACA 240
```

Qу

Db

Qу

Db

Qy

Db

Qу

Db	6310		6369
Qу	241	$\tt CCTGCCATTGTGGAACAGATGTCGCAGCGGCACTCCTGGCGGCTCGTTCAGGAAGAGCGA$	300
Db	6370		6429
Qу	301	$\tt CGCGTGCAACTGGAATGTTTGCCGGATGGCAGATTCAAATCAACCGGGACGACGGAACA$	360
Db	6430		6489
Qу	361	$\tt TGGAGTATACGCCATCTCGGCTTTGGGACAGCCGTCGAGGCCATCACGTGGTACAAGCGC$	420
Db	6490	TGGAGTATACGCCATCTCGGCTTTGGGACAGCCGTCGAGGCCATCACGTGGTACAAGCGC	6549
Qу	421	$\tt AAAAAAGGCGGCGCATTGACGTTTGCTTCGCTCGACAATGCCCGGTTCTATGGACTTGGC$	480
Db	6550	AAAAAAGGCGGCGCATTGACGTTTGCTTCGCTCGACAATGCCCGGTTCTATGGACTTGGC	6609
Qу	481	${\tt GAAAAGCCGGGGCCCCTTGACAAGCGGCACGAGGCGTACACCATGTGGAATTCGGACGTT}$	540
Db	6610	GAAAAGCCGGGGCCCCTTGACAAGCGGCACGAGGCGTACACCATGTGGAATTCGGACGTT	6669
Qу	541	${\tt TACGCGCCTCACGTGCCAGAGATGGAGGCCCTATACCTGTCGATCCCGTTCTTTTTGCGA}$	600
Db	6670	TACGCGCCTCACGTGCCAGAGATGGAGGCCCTATACCTGTCGATCCCGTTCTTTTTGCGA	6729
Qу	601	$\tt TTGCAAGACCAAACGGCCGTTGGCATCTTTGTGGATAATCCAGGGCGATCCCGCTTTGAC$	660
Db	6730	TTGCAAGACCAAACGGCCGTTGGCATCTTTGTGGATAATCCAGGGCGATCCCGCTTTGAC	6789
Qу	661		720
Db	6790	TTCAGGAGCAGATACCCTGACGTGGAAATATCGACAGAACGAGGCGGGTTGGACGTTAT	6849
Qу	721	$\tt TTCATCTTCGGGGGCTTCGCTCAAAGATGTCATTCGACGTTACACAAAGCTCACGGGGCGA$	780
Db	6850	TTCATCTTCGGGGCTTCGCTCAAAGATGTCATTCGACGTTACACAAAGCTCACGGGGCGA	6909
Qу	781	$\tt ATGCCGATGCCACCCAAGTGGGCGCTCGGCTATCATCAGTCTCGGTACTCGTACGAGACC$	840
Db	6910	ATGCCGATGCCACCCAAGTGGGCGCTCGGCTATCATCAGTCTCGGTACTCGTACGAGACC	6969
Qу	841	${\tt CAGAGCGAGGTCCTGTCGGTGGCGCAAACGTTTGTCGAGCGCGACATTCCGGTGGATGCC}$	900
Db	6970	CAGAGCGAGGTCCTGTCGGTGGCGCAAACGTTTGTCGAGCGCGACATTCCGGTGGATGCC	7029
Qу	901	$\tt TTGTATCTGGATATTCACTACATGGATGGATATCGGGTGTTCACCTTTGATGAGAGGCGA$	960
Db	7030		7089
Qу	961	TTTCCCGATCCGGCACGCATGTGCGACGAGTTGCGGAAGCTTGGGGTGCGCGTTGTCCCC	1020
Db	7090	TTTCCCGATCCGGCACGCATGTGCGACGAGTTGCGGAAGCTTGGGGTGCGCGTTGTCCCC	7149
Qу	1021	ATCGTGGATCCGGGGGTGAAACAGGATCCTGAATATCCCGTTTACATGGACGGGCTAGCC	1080
Db	7150	ATCGTGGATCCGGGGGTGAAACAGGATCCTGAATATCCCGTTTACATGGACGGGCTAGCC	7209
Qу	1081	CACAACCACTTCTGCCAAACCGCCGAGGGTCAAGTGTATCTTGGTGAGGTATGGCCCGGA	1140

Db	7210	CACAACCACTTCTGCCAAACCGCCGAGGGTCAAGTGTATCTTGGTGAGGTATGGCCCGGA	7269
Qy	1141		1200
Db	7270		7329
Qy	1201	CGGGTGTACACCCAGATGGGAATTGAGGGCCATATGGAATGATATGAACGAGCCGGCTGTG	1260
Db	7330	CGGGTGTACACCCAGATGGGAATTGAGGGCATATGGAATGATATGAACGAGCCGGCTGTG	7389
Qy	1261	TTCAATGAGACGAAGACCATGGACGTGAACGTGGTCCACCGAGGCGACGGACG	1320
Db	7390	TTCAATGAGACGAAGACCATGGACGTGAACGTGGTCCACCGAGGCGACGGACG	7449
Qy	1321	ACGCACGGAGAGGTCCACAACCTCTATGGATTCTGGATGGCTGAAGCCACGTATCGCGGA	1380
Db	7450		7509
Qy	1381	CTGAAAGCGCAGTTGGCTGGCAAGCGGCCTTTTGTGCTCACGCGCGCTGGCTACAGCGGA	1440
Db	7510	CTGAAAGCGCAGTTGGCTGGCAAGCGGCCTTTTGTGCTCACGCGCGCTGGCTACAGCGGA	7569
Qу	1441	ATTCAACGGTATGCGGCGGTGTGGACGGGCGACAACCGAAGCTTTTGGGAACATATGGCC	1500
Db	7570	ATTCAACGGTATGCGGCGGTGTGGACGGCGACAACCGAAGCTTTTGGGAACATATGGCC	7629
Qу	1501	ATGGCCATCCCGATGGTGCTCAACATGGGGATGTCCGGTATTCCGCTCGGGGGCCCAGAT	1560
Db	7630	ATGGCCATCCCGATGGTGCTCAACATGGGGATGTCCGGTATTCCGCTCGGGGGCCCAGAT	7689
Qу	1561	GTGGGCGGTTTCGCTCATCACGCTTCAGGTGAATTGCTTGC	1620
Db	7690	GTGGGCGGTTTCGCTCATCACGCTTCAGGTGAATTGCTTGC	7749
Qу	1621	GCGTTCTTTCCGTTCTTTCGAAATCACAGTGCCATGGGAACGCATCGACAGGAACCTTGG	1680
Db	7750	GCGTTCTTTCCGAAATCACAGTGCCATGGGAACGCATCGACAGGAACCTTGG	7809
Qу	1681	GCATTCGGCCCTACGTTCGAAGCCGTCATTCGACGTGCCATCCGGCTCCGTTATCGTTTC	1740
Db	7810	GCATTCGGCCCTACGTTCGAAGCCGTCATTCGACGTGCCATCCGGCTCCGTTATCGTTTC	7869
Qу	1741	CTGCCTTATCTGTACACGCTCGCACGGGAAGCCCATGAGACAGGTTTACCCATGATGCGG	1800
Db	7870	CTGCCTTATCTGTACACGCTCGCACGGGAAGCCCATGAGACAGGTTTACCCATGATGCGG	7929
Qу	1801	CCCTTGGTGTTAGAGTATCCCGACGATCCAAACACGCACCACGTCGATGATCAGTTCCTC	1860
Db	7930	CCCTTGGTGTTAGAGTATCCCGACGATCCAAACACGCACCACGTCGATGATCAGTTCCTC	7989
Qу	1861	GTCGGTTCCGATCTTCTCGTGGCACCCATCCTCAAGCCGGGCATGGCCCATAGAATGGTC	1920
Db	7990	GTCGGTTCCGATCTTCTCGTGGCACCCATCCTCAAGCCGGGCATGGCCCATAGAATGGTC	8049
Qу	1921	TATTTGCCCGATGGAGAATGGATTGATTATGAGACGCGTGAGCGATACCAAGGGCGTCAG	1980
Db	8050		8109
Qy	1981	TACATCTTGACGTATGCGCCTCTCGATCGTATCCCTCTGTACGTGAGGGCAGGGAGCGCCCTCTGTACGTGAGGGCAGGGAGCGCCCTACATCTTGACGTATGCGCCTCTCGATCGTATCCCTCTGTACGTGAGGGCAGGGAGCGCCCCTACATCTTGACGTATGCGCAGGGAGCGCCCCCTCTGTACGTGAGGGCAGGGAGCGCCCCCTCTGTACGTGAGGGCAGGGAGCGCCCCCTCTGTACGTGAGGGCAGGGAGCGCCCCCCTCTGTACGTGAGGGCAGGGAGCGCCCCCCCTCTGTACGTGAGGGCAGGGAGCGCCCCCCCC	2040
Db	8110		8169

Qу	2041	ATCCCCGTGAACCTCTTGGAGCGGTCGGGCGAGACCCAGCTAGGATGGGAGATCTTCGTG	2100
Db	8170	ATCCCCGTGAACCTCTTGGAGCGGTCGGGCGAGACCCAGCTAGGATGGGAGATCTTCGTG	8229
Qy	2101	GACGCCAACGGTCGAGCCTCGGGTCGATGCTATGAGGACGACGGCGAGACGTTTAGCTAT	2160
Db	8230	GACGCCAACGGTCGAGCCTCGGGTCGATGCTATGAGGACGACGGCGAGACGTTTAGCTAT	8289
Qy	2161	GAAGACGGCGCCTACTGTGATCGCGTGTTACAGGCCCTCGCCACCTCGGAAGGAA	2220
Db	8290	GAAGACGGCCCTACTGTGATCGCGTGTTACAGGCCCTCGCCACCTCGGAAGGAA	8349
Qy	2221	ATCGAATGTCATCTTGTTCAAGGATCAGGAGATGGTGGAAGTCTCGAGAGCGTTGTTCGC	2280
Db	8350	ATCGAATGTCATCTTGTTCAAGGATCAGGAGATGGTGGAAGTCTCGAGAGCGTTGTTCGC	8409
Qу	2281	GTGTTCACACCAGATGACGTTCGTGAGGCTCGTGCGCAGGGCATATCGTTTTCCATCCA	2340
Db	8410	GTGTTCACACCAGATGACGTTCGTGAGGCTCGTGCGCAGGGCATATCGTTTTCCATCCA	8469
Qу	2341	GTGTGA 2346	
Db	8470	GTGTGA 8475	

<!--EndFragment-->